

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-4 (Cancelled).

Claim 5 (Currently Amended): A process for producing a hexagonal lithium-cobalt composite oxide for a lithium secondary cell, which comprises:

dry blending a cobalt oxyhydroxide powder having an average particle size of from 1 to 20 μm and a specific surface area of from 2 to 200 m^2/g , a lithium carbonate powder having an average particle size of from 1 to 50 μm and a specific surface area of from 0.1 to 10 m^2/g , and a powder of an oxide of metal element M having an average particle size of at most 10 μm and a specific surface area of from 1 to 100 m^2/g ; and

firing a mixture of the powders at a temperature of from 850 to 1,000°C in an oxygen-containing atmosphere,

wherein the hexagonal lithium-cobalt composite oxide is represented by the formula $\text{LiCo}_{1-x}\text{M}_x\text{O}_2$, wherein x is $0.0005 \leq x \leq 0.02$ and M is at least one member selected from the group consisting of Ta, Ti, Nb, Zr and Hf, and which has a half-width of the diffraction peak for (110) face at $2\theta = 66.5 \pm 1^\circ$, of from 0.070 0.080 to 0.180°, as measured by the X-ray diffraction using CuK_α as a ray source.

Claim 6 (Previously Presented): The process according to Claim 5, wherein the mixture is fired at time ranging from 4 to 30 hours.

Claims 7-11 (Canceled).

Claim 12 (Previously Presented): The process according to Claim 5, wherein the half-width of the diffraction peak for (110) face ranges from 0.100 to 0.165°.

Claim 13 (Previously Presented): The process according to Claim 5, wherein a packing press density of the hexagonal lithium-cobalt composite oxide ranges from 2.90 to 3.35 g/cm³.

Claim 14 (Previously Presented): The process according to Claim 5, wherein a packing press density of the hexagonal lithium-cobalt composite oxide ranges from 3.05 to 3.25 g/cm³.

Claim 15 (Previously Presented): The process according to Claim 5, wherein the cobalt oxyhydroxide powder has an average particle size ranging from 4 to 15 µm.

Claim 16 (Previously Presented): The process according to Claim 5, wherein the cobalt oxyhydroxide powder has a specific surface area ranging from 20 to 100 m²/g.

Claim 17 (Previously Presented): The process according to Claim 5, wherein the lithium carbonate powder has an average particle size ranging from 5 to 30 µm.

Claim 18 (Previously Presented): The process according to Claim 5, wherein the lithium carbonate powder has a specific surface area ranging from 0.3 to 3 m²/g.

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Claim 19 (Previously Presented): The process according to Claim 5, wherein the mixture is fired at a time ranging from 8 to 20 hours.

Claim 20 (Previously Presented): The process according to Claim 5, wherein an oxygen concentration in the oxygen-containing atmosphere ranges from 10 to 100 volume%.

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DISCUSSION OF THE AMENDMENT

Claim 1 has been amended by changing “0.070” to --0.080--, as supported by the specification at page 6, line 4.

No new matter is believed to have been added by the amendments. Claims 5-6 and 12-20 remain pending in the application.